AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of estimating a process efficiency of a dialysis system comprising a dialyzer ~~(130) and a patient (120)~~, wherein said dialyzer is connected to a ~~where the~~ patient's blood system ~~is connected to the dialyzer (130) such that the dialyzer (130) performs~~ for performing a dialysis treatment of ~~the~~ a patient ~~(120)~~, ~~the~~ said dialyzer ~~(130)~~ having a potential cleaning capacity (K_{eff}, K), ~~characterized by~~ wherein said method comprises ~~the step of~~:

determining a whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) ~~which expresses how well the patient (120) responds~~ defining a patient's response to the potential cleaning capacity (K_{eff}, K).

2. (Currently Amended) A method according to claim 1, ~~characterized by~~ wherein the step of determining the whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) ~~by~~ comprises:

measuring a final blood urea concentration no later than approximately one minute after the end of ~~the~~ a dialysis treatment[[,]];

measuring an equilibrated blood urea concentration no earlier than approximately one half hour after the end of the dialysis treatment[[,]]; and

dividing said final blood urea concentration by said equilibrated blood urea concentration.

3. (Currently Amended) A method according to claim 2, wherein said ~~characterized by measuring the~~ final blood urea concentration is measured ~~directly~~

immediately after the end of the dialysis treatment to obtain the whole body clearance ratio (K_{wb}/K) ~~in~~ with respect ~~of~~ to a dialyzer clearance (K).

4. (Currently Amended) A method according to claim 2, ~~characterized by measuring the~~ wherein said final blood urea concentration is measured approximately one minute after the end of the dialysis treatment to obtain the whole body clearance ratio (K_{wb}/K_{eff}) with ~~in~~ respect ~~of~~ to an effective clearance (K_{eff}).

5. (Currently Amended) A method according to claim 1, wherein the step of ~~characterized by~~ determining the whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) ~~by~~ comprises of:

measuring an initial urea concentration ($C_{d0}[[;]]_{,}C_{bo}$)[[,]];

measuring~~, during the treatment at occasions being well spaced in time~~ at least two subsequent urea concentration values at spaced time intervals after the dialysis treatment has started, a first value of said at least two values being measured no earlier than approximately one half hour after the dialysis treatment has started[[,]];

deriving a starting urea concentration based on an extrapolation in time of said at least two values back to the start of the dialysis treatment[[,]]; and

dividing said starting urea concentration by said initial urea concentration ($C_{dO}[[;]]_{,}$ C_{bO}).

6. (Currently Amended) A method of estimating a whole body clearance ratio (K_{wb}/K_{eff}), with respect to an effective clearance (K_{eff}), of a dialysis treatment of a patient ~~(120)~~, ~~the~~ said whole body clearance ratio (K_{wb}/K_{eff}) defining a response ~~expressing how well the patient (120) responds~~ to a potential cleaning capacity (K_{eff}) of

a dialyzer ~~(130.) which performs the~~ performing the dialysis treatment, ~~characterized by~~ comprising:

determining the whole body clearance ratio (K_{wb}/K_{eff}), with respect to the effective clearance (K_{eff}), based on a measurement of a slope (K_{wb}/V) of a logarithmic removal rate function (C_d, C_b), said function corresponding to a lowering of a ~~which describes how a~~ urea concentration during the dialysis treatment ~~is lowered in course of the~~ treatment.

7. (Currently Amended) A method according to claim 6, ~~characterized by~~ further comprising ~~the steps of~~:

determining an initial dialysate urea concentration (C_{d0})[[,]];

determining a total flow rate (Q_d) of spent dialysate during the dialysis treatment, said dialysis treatment including any ultrafiltration[[,]];

calculating, based on measurements performed during a steady state phase (t_3 - t_4) of the treatment, the slope (K_{wb}/V) of said logarithmic removal rate function (C_d)[[,]];

measuring a predialysis urea mass (m_0) ~~in the patient (120)~~[[,]]; and

determining the whole body clearance ratio (K_{wb}/K_{eff}), with respect to the effective clearance (K_{eff}), as ~~the~~ a product of said slope (K_{wb}/V) and said predialysis urea mass (m_0), divided by said total flow rate (Q_d) and divided by said initial dialysate urea concentration (C_{dO}).

8. (Currently Amended) A method according to claim 6, ~~characterized by~~ further comprising ~~the steps of~~:

calculating, based on measurements performed during a steady state phase (t_3 - t_4) of the dialysis treatment, the slope (K_{wb}/V) of said logarithmic removal rate function ($C_d[[;]]_1$ $C_b)[[,]]_1$

determining an entire distribution volume $(V)[[,]]_1$ and

determining the whole body clearance ratio ($K_{wb}/K_{eff}[[;]]_1K_{wb}/K$) as the product of said slope (K_{wb}/V) and said entire distribution volume (V) divided by the potential cleaning capacity ($K_{eff}[[;]]_1K$).

9. (Currently Amended) A method according to ~~any~~ one of ~~the~~ claims 7 or 8, ~~characterized by performing the measurements of~~ wherein the slope (K_{wb}/V) of said logarithmic removal rate function (C_d) is measured on a dialysate side of a dialysis system comprising the dialyzer ~~(130) and the patient (120)~~.

10. (Currently Amended) A method according to claim 8, ~~characterized by performing the measurements of~~ wherein the slope (K_{wb}/V) of said logarithmic removal rate function (C_b) is measured on a blood side of a dialysis system comprising the dialyzer ~~(130) and the patient (120)~~.

11. (Currently Amended) A computer program directly loadable into ~~the~~ an internal memory of a computer, comprising instructions executable by the computer for performing the ~~software for controlling the steps of any of the claims 1 to 5~~ method of claim 1 ~~when said program is run on the computer~~.

12. (Currently Amended) A computer readable medium, having a program recorded thereon, ~~where the~~ wherein said program ~~is to make~~ comprises instructions executed by the computer for ~~a computer control the steps of any of the claims 1 to 5~~ performing the method of claim 1.

13. (Currently Amended) A computer program directly loadable into ~~the~~ an internal memory of a computer, comprising instructions executable by the computer for performing the ~~software for controlling the steps of any of the claims 6 to 10~~ method of claim 6 ~~when said program is run on the computer~~.

14. (Currently Amended) A computer readable medium, having a program recorded thereon, ~~where the~~ wherein said program ~~is to make~~ comprises instructions executed by the computer for ~~a computer control the steps of any of the claims 6 to 10 to employ~~ performing the method of claim 6.

15. (Currently Amended) A method of performing a dialysis treatment program ~~with respect to a patient (120)~~ by ~~means of~~ a dialyzer ~~(130), the program comprising repeated dialysis treatments, **characterized by**~~ , said method comprising the steps of:

performing a first dialysis treatment of the patient ~~(120)~~ under a first set of conditions which include at least one of a treatment time and a composition of ~~the~~ a dialysate in the dialyzer ~~(130)~~[[,]];

estimating, ~~in course of~~ during the first dialysis treatment, a whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) according to ~~any~~ one of ~~the~~ claims 2 to 6~~5, or any one of the claims 6 to 10~~[[,]];

comparing the whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) ~~with~~ to a threshold ratio[[,]]; and ~~if the whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) is less than the threshold ratio~~

performing a dialysis treatment of the patient ~~(120)~~ after said first dialysis treatment under a second set of conditions which are different from the first set of

conditions, if the whole body clearance ratio (K_{wb}/K_{eff}, K_{wb}/K) is less than the threshold ratio.

16. (Currently Amended) An apparatus ~~(210)~~ adapted to estimate a whole body clearance ratio of a dialysis treatment of a patient ~~(120)~~, the whole body clearance ratio (K_{wb}/K_{eff}), with respect to an effective clearance (K_{eff}), defining a response ~~expressing how well the patient (120) responds~~ to a potential cleaning capacity of a dialyzer ~~(130) which performs~~ performing the dialysis ~~the~~ treatment, ~~the~~ said apparatus ~~(210)~~ comprising:

a urea monitor circuit ~~(211)~~ adapted to[[:]] determine an initial dialysate urea concentration (C_{d0})[[;]], determine a total flow rate (Q_d) of spent dialysate during the dialysis treatment including any ultra filtration[[;]], measure, during a steady state phase (t_3 - t_4) of the dialysis treatment, a slope (K_{wb}/V) of a removal rate function corresponding to a lowering of ~~which describes how~~ a dialysate urea concentration ~~is lowered in course of~~ during the dialysis treatment[[;]], and measure a predialysis urea mass (m_0) ~~in the patient (120)~~[[,]]; and

a processor ~~(212)~~ adapted to determine the whole body clearance ratio (K_{wb}/K_{eff}) for the patient ~~(120)~~, the whole body clearance ratio (K_{wb}/K_{eff}), with respect to the effective clearance (K_{eff}), being determined as the product of said slope (K_{wb}/V) and said predialysis urea mass (m_0), divided by said flow rate (Q_d) and divided by said initial dialysate urea concentration (C_{d0}).

17. (Currently Amended) Use of the apparatus ~~(210)~~ according to the claim 16 for estimating a whole body clearance ratio of a dialysis treatment of a patient ~~(120)~~.